

DETAILED ACTION

Status of Claims

1. The status of the claims as filed in the reply dated 7/27/2011 are as follows:

Claims 1, 9-12, and 28-35 are pending;

Claims 28-35 are newly added;

Claims 29-34 are withdrawn from consideration;

Claims 2-8 and 13-27 have been cancelled by the applicant.

Election/Restrictions

2. Claims 29-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election of Species 3 (Figure 4) was made **without** traverse in the reply filed on 10/13/2009. Applicant had previously withdrawn Claims 2-6 and 18-19 from consideration, which are similar in scope to newly added claims 29-34.

Drawings

3. The drawings were received on 1/10/2006. These drawings are accepted.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 3785

Claims 1, 9-12, 28, and 35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites in lines 17-18 the limitation "with said liquid film layer having a non-zero thickness dimension throughout". There is no description in the original disclosure of a "non-zero thickness dimension throughout". Therefore, this limitation is new matter. Further, it appears that the drawings illustrate in Figure 2 that there is a zero thickness of the liquid film layer near the nozzle outlet, which is contrary to the claimed limitation.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 9-12, 28, and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites in lines 17-18 the limitation "with said liquid film layer having a non-zero thickness dimension throughout". It is not clear from the limitation as to what area is defined by "throughout". Is "throughout" the height of the liquid film as taken from a cross-sectional profile or is it the surface area of the liquid film on the partition plate? Clarification of what area "throughout" defines is requested. Further, it is not clear as to how the invention achieves a constant non-zero thickness throughout the whole partition surface area since the nozzle outlets

Art Unit: 3785

are illustrated as being separated from one another, thus causing a zero thickness space to form in-between the nozzle outlets.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 9-12, 28, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitcomb (US4173212, previously cited) in view of Yelliot (US3146774) and in further view of Worrall (US4874026, as previously cited).

Re Claim 1. Whitcomb teaches a partition for separating two areas, an outer area and an inner area, the partition comprising (Figure 1):

two translucent separation walls (ref 18, 22) (Column 2 lines 23-33),

means for moving a liquid (ref 48) between said separation walls, said means comprising liquid dispensing nozzles (ref 54) arranged to provide a moving liquid film layer (Column 1 line 65 to Column 2 line 6; Column 3 lines 14-26; Column 3 line 64 to Column 4 line 11),

wherein one of said separation walls is an external separation wall in contact with said outer area (ref 22), wherein the other of said separation walls is an internal separation wall in contact with said inner area (ref 18),

wherein the partition separates and interior of a building construction from surroundings of the building construction (Column 3 lines 14-26; Column 3 line 64 to Column 4 line 11),

Art Unit: 3785

wherein said partition is installed at an inclination (Figure 1),

wherein said liquid film layer covers and moves over said internal separation wall, (Column 3 lines 14-26; Column 3 line 64 to Column 4 line 11; The water will create a liquid film layer that flows down the inside partition),

wherein said internal separation wall provided with the liquid film layer is adjacent to the interior of said building construction (Figure 1),

a thermal insulating space (32) being present between a top face of said liquid film and the external separation wall, said thermal insulating space providing insulating properties between said top face of said liquid and the external separation wall (Column 2 lines 42-51, Column 4 lines 45-61),

said external separation wall being installed permanently (Figure 3 illustrates the external wall anchored to the foundation; Column 3 lines 55-58), and

said internal separation wall being removable from said partition (Figure 3 illustrates that the internal wall can be removed by undoing the bolts 72 and wood runner 70; Column 3 lines 50-54).

Whitcomb teaches that the two panels are spaced apart and that spacers can be utilized to accomplish this (Column 2 lines 42-51) but fails to specifically teach that the two panels are at least five millimeters apart. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to space the two panels about five millimeters apart, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d272, 205 USPQ 215 (CCPA 1980).

Whitcomb fails to further teach said liquid film layer having a non-zero thickness dimension throughout and that the internal separation wall can be removed from said partition by rolling up of said internal separation wall.

However, Yelliot teaches a liquid film layer having a constant and uniform thickness throughout the whole heat exchanger (1) (Figures 1-3; Column 2 lines 64-71 and Column 3 lines 3-16). Therefore, in view of Yelliot's teaching, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the heat exchanger of Whitcomb to have a uniform liquid film layer as this would allow for increased efficiency in exchanging heat since the water is spread completely throughout the two partition panels (Yelliot, Column 1 lines 21-33 discusses the disadvantages of the conventional prior art; Column 3 lines 3-16 discusses the benefits of a uniform liquid film layer in the heat exchanger).

Whitcomb as modified by Yelliot fails to teach that the internal separation wall can be removed from said partition by rolling up of said internal separation wall. However, Worrall teaches said internal separation wall is configured to be rolled up by moving said roller construction toward said fixing, and said internal separation wall is further configured to be unrolled by moving said roller construction away from said fixing (Figure 1; Column 2 lines 50-64; Column 3 lines 5-15; Column 3 lines 21-31). Therefore, in view of Worrall's teaching, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the internal wall structure of Whitcomb as modified by Yelliot to include a roller assembly in order to provide selective heat transfer only when additional cooling is necessary, thus increasing the efficiency of the system.

Art Unit: 3785

Re Claim 9. Whitcomb teaches the internal separation wall or the external separation wall comprises polyethylene plastic (Column 4 lines 45-47). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use polyamide, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. In this instance, both materials are a clear plastic that are commonly used in heat exchange.

Re Claim 10. Whitcomb teaches that the external separation wall is provided with a surface that can be removed therefrom in order to form an opening in said external separation wall (Figure 3, Column 3 lines 55-58; The bolt and wood runner can be undone in one section to create an opening).

Re Claim 11. Whitcomb teaches a frame (ref 24) that is arranged around said internal separation wall and contains a liquid feed (ref 46) and a liquid discharge (ref 54) (Column 2 lines 35-51, Column 3 lines 1-26; Column 3 line 64 to Column 4 line 11).

Re Claim 12. Whitcomb teaches said internal separation wall can be moved into a space near said frame (Figure 1 and 2, Column 2 lines 35-51).

Art Unit: 3785

Re Claim 28. Whitcomb teaches the thickness dimension of said liquid film is sufficient that a temperature of said internal separation wall approaches a temperature of said liquid film (Column 2 lines 1-12 and 42-51; Column 3 line 64 to Column 4 line 11; Column 4 lines 45-61).

Re Claim 35. Whitcomb as modified by Yelliot teaches a two panel heat exchanger but fails to specifically teach said internal separation wall comprises a fixing, and a roll-up section, the fixing, when moving towards the roll-up section, covers the liquid film layer moving over the roll-up section and a remaining portion of said internal separation wall adjacent the roll-up section.

Worrall teaches a fixing attached to a structure wherein, an internal separation wall is comprised of i) a roll-up film (ref 40), and ii) a roller construction (ref 16, 38) connected to said roll-up film for rolling up and unrolling the roll-up film (Figure 1; Column 2 lines 50-64; Column 3 lines 5-15) said internal separation wall is configured to be rolled up by moving said roller construction toward said fixing, and said internal separation wall is further configured to be unrolled by moving said roller construction away from said fixing (Column 3 lines 21-31).

In view of Worrall's teaching it would have been obvious to one of ordinary skill in the art at the time of invention to modify the internal wall structure of Whitcomb as modified by Yelliot to include a roller assembly in order to provide selective heat transfer only when additional cooling is necessary, thus increasing the efficiency of the system.

Response to Arguments

8. Applicant's arguments with respect to claim 1 has been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRAVIS RUBY whose telephone number is (571)270-5760. The examiner can normally be reached on Monday-Friday 9:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3785

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/Travis Ruby/
Examiner, Art Unit 3785

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for Judy Swann, SPE of Art Unit 3785